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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,498

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Rene Rye Larsen

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EXAMINER

ROBINSON, RYAN C

ART UNIT

PAPER NUMBER

2614

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,498	Applicant(s) LARSEN, RENE RYE	
	Examiner RYAN C. ROBINSON	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/6/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. After careful consideration, Examiner has withdrawn the restriction requirement set forth in the previous office action. Claims 1-34 will be examined on the merits.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-34 are rejected under 35 U.S.C. 103(a), as being unpatentable over Bächler et al, U.S. Patent No. 7,349,549, filed on 3/25/2003, (hereby Bächler), in view of Brown et al., U.S. Patent No. 6,366,622, published on 4/2/2002, (hereby Brown).**

4. As to claim 1, Bächler discloses a hearing aid (Fig. 1) comprising a transceiver (10) for interconnection of the hearing aid with a wireless network (Col. 3, lines 55-56). It is noted that Bächler does not explicitly teach a communication controller that is adapted for controlling data exchange through the network in accordance with a network protocol, and wherein the controller is further adapted for initialization of the network in an acquisition mode by controlling the transceiver to transmit interrogation

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data repetitively, and upon receipt of an interrogation data received message from another device, in a connected mode acting as a master of the network by repetitively transmitting synchronization data at intervals that are longer than the intervals between transmitted interrogation data in the acquisition mode. However, Bächler does teach that the hearing aid can be adapted for use with Bluetooth (Col. 7, lines 39-40), and such a controller was well known in the art.

Brown teaches a communication controller (Col. 4, lines 59-60) that is adapted for controlling data exchange through the network in accordance with a network protocol, and wherein the controller is further adapted for initialization of the network in an acquisition mode by controlling the transceiver (1102) to transmit interrogation data repetitively, and upon receipt of an interrogation data received message from another device, in a connected mode acting as a master of the network (Col. 5, lines 29-30) by repetitively transmitting synchronization data at intervals that are longer than the intervals between transmitted interrogation data in the acquisition mode (The maximum rate is 1600 hops/second, except during acquisition mode where the rate is 3200; Col. 24, lines 24-25). Therefore, it would have been obvious to one of ordinary skill, at the time of applicant's invention, to use the controller taught by Brown, as a suitable Bluetooth controller, thereby allowing compatibility with other Bluetooth devices.

5. As to claim 2, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted to act as a slave in the network upon

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receipt of interrogation data from another hearing aid, the other hearing aid being the master of the network. (Col. 5, lines 29-30)

6. As to claim 3, Bächler and Brown remain as applied above. Brown further teaches that the controller, in the acquisition mode, is further adapted to enable the receiver to receive data from the network in certain time periods during which transmission of synchronization data is inhibited. (The device is capable of full duplex transmission; Col. 3, lines 66-67)

7. As to claim 4, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for selective operation of the transceiver in a plurality of frequency channels (There are 79 channels; Col. 5, lines 10-12).

8. As to claim 5, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a time division multiplex scheme (Col 3, lines 66-67).

9. As to claim 6, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a frequency division multiplex scheme (The controller uses frequency hopping; Col. 3, lines 51-53).

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10. As to claim 7, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a spread spectrum scheme (Col. 5, lines 9-10).

11. As to claim 8, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a frequency hopping scheme (Col. 3, lines 51-53).

12. As to claim 9, Bächler and Brown remain as applied above. Brown further teaches that a frequency hopping algorithm is provided that allows devices in the network to calculate what frequency channel the network will use at any given point in time without relying on the history of the network (All slaves are synchronized to the master's hopping sequence; Col 4, lines 24-27).

13. As to claim 10, Bächler and Brown remain as applied above. Brown further teaches one device in the network is a master device, and all other devices in the network synchronize to the timing of the master device utilizing the synchronization data (Col 4, lines 24-27).

14. As to claim 11, Bächler and Brown remain as applied above. Brown further teaches that a new device is automatically recognized by the network and

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interconnected with the network (A connection is made by an inquiry, or acquisition message; Col 27, lines 31-34).

15. As to claim 12, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for reception of data from devices that do not receive data from the network. (The controller can also perform point-to-multi-point connections; Col. 4, lines 38-39).

16. As to claim 13, Bächler and Brown remain as applied above. Bächler further teaches a binaural hearing aid system comprising a first and a second hearing aid mutually interconnected for data exchange through the network (Col. 4, lines 20-22).

17. As to claim 14, Bächler and Brown remain as applied above. Bächler further teaches a remote controller for a hearing aid and adapted to communicate with the hearing aid through the wireless network (Col. 7, lines 35-37).

18. As to claim 15, Bächler and Brown remain as applied above. Bächler further teaches a fitting instrument for a hearing aid and adapted to communicate with the hearing aid through the wireless network (The remote control device can adjust parameters; Col. 7, lines 35-37).

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19. As to claim 16, Bächler and Brown remain as applied above. Bächler further teaches a mobile phone adapted to communicate with the hearing aid through the wireless network (Col. 7, lines 38-41).

20. As to claim 17, Bächler and Brown remain as applied above. Bächler further teaches a broadcast system adapted to communicate with the hearing aid through the wireless network (Col. 7, lines 42-43).

21. As to claim 18, Bächler teaches a binaural hearing aid system comprising a first and a second hearing aid that are interconnected for data exchange, wherein the first and second hearing aid are interconnected through a wireless network (Col. 4, lines 20-22).

22. As to claim 19, Bächler and Brown remain as applied above. Bächler further teaches that at least one of the first and second hearing aids further comprises a transceiver (10) for interconnection of the hearing aid with a wireless network (Col. 3, lines 55-56)

It is noted that Bächler does not explicitly teach a communication controller that is adapted for controlling data exchange through the network in accordance with a network protocol, and wherein the controller is further adapted for initialization of the network in an acquisition mode by controlling the transceiver to transmit interrogation data repetitively, and upon receipt of an interrogation data received message from

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another device, in a connected mode acting as a master of the network by repetitively transmitting synchronization data at intervals that are longer than the intervals between transmitted interrogation data in the acquisition mode. However, Bächler does teach that the hearing aid can be adapted for use with Bluetooth (Col. 7, lines 39-40), and such a controller was well known in the art.

Brown teaches a communication controller (Col. 4, lines 59-60) that is adapted for controlling data exchange through the network in accordance with a network protocol, and wherein the controller is further adapted for initialization of the network in an acquisition mode by controlling the transceiver (1102) to transmit interrogation data repetitively, and upon receipt of an interrogation data received message from another device, in a connected mode acting as a master of the network (Col. 5, lines 29-30) by repetitively transmitting synchronization data at intervals that are longer than the intervals between transmitted interrogation data in the acquisition mode (The maximum rate is 1600 hops/second, except during acquisition mode where the rate is 3200; Col. 24, lines 24-25). Therefore, it would have been obvious to one of ordinary skill, at the time of applicant's invention, to use the controller taught by Brown, as a suitable Bluetooth controller, thereby allowing compatibility with other Bluetooth devices.

23. As to claim 20, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted to act as a slave in the network upon receipt of interrogation data from another hearing aid, the other hearing aid being the master of the network. (Col. 5, lines 29-30)

24. As to claim 21, Bächler and Brown remain as applied above. Brown further teaches that the controller, in the acquisition mode, is further adapted to enable the receiver to receive data from the network in certain time periods during which transmission of synchronization data is inhibited. (The device is capable of full duplex transmission; Col. 3, lines 66-67)

25. As to claim 22, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for selective operation of the transceiver in a plurality of frequency channels (There are 79 channels; Col. 5, lines 10-12).

26. As to claim 23, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a time division multiplex scheme (Col 3, lines 66-67).

27. As to claim 24, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a frequency division multiplex scheme (The controller uses frequency hopping; Col. 3, lines 51-53).

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28. As to claim 25, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a spread spectrum scheme (Col. 5, lines 9-10).

29. As to claim 26, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for operation of the transceiver according to a frequency hopping scheme (Col. 3, lines 51-53).

30. As to claim 27, Bächler and Brown remain as applied above. Brown further teaches that a frequency hopping algorithm is provided that allows devices in the network to calculate what frequency channel the network will use at any given point in time without relying on the history of the network (All slaves are synchronized to the master's hopping sequence; Col 4, lines 24-27).

31. As to claim 28, Bächler and Brown remain as applied above. Brown further teaches one device in the network is a master device, and all other devices in the network synchronize to the timing of the master device utilizing the synchronization data (Col 4, lines 24-27).

32. As to claim 29, Bächler and Brown remain as applied above. Brown further teaches that a new device is automatically recognized by the network and

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interconnected with the network (A connection is made by an inquiry, or acquisition message; Col 27, lines 31-34).

33. As to claim 30, Bächler and Brown remain as applied above. Brown further teaches that the controller is further adapted for reception of data from devices that do not receive data from the network. (The controller can also perform point-to-multi-point connections; Col. 4, lines 38-39).

34. As to claim 31, Bächler and Brown remain as applied above. Bächler further teaches a remote controller for a binaural hearing aid system and adapted to communicate with a binaural hearing aid system hearing aid through the wireless network (Col. 7, lines 35-37).

35. As to claim 32, Bächler and Brown remain as applied above. Bächler further teaches a fitting instrument for a binaural hearing aid system and adapted to communicate with a binaural hearing aid system according to claim 18 through the wireless network (The remote control device can adjust parameters; Col. 7, lines 35-37).

36. As to claim 33, Bächler and Brown remain as applied above. Bächler further teaches a mobile phone adapted to communicate with a binaural hearing aid system according to claim 18 through the wireless network (Col. 7, lines 38-41).

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37. As to claim 34, Bächler and Brown remain as applied above. Bächler further teaches a broadcast system adapted to communicate with a binaural hearing aid system according to claim 18 through the wireless network (Col. 7, lines 42-43).

Conclusion

The prior art made of record

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|----|------------------|------------------|
| a. | US Patent Number | 7,349,549 |
| b. | US Patent Number | 6,366,622 |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan C. Robinson whose telephone number is (571) 270-3956. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

/R. C. R./

Examiner, Art Unit 2614

/CURTIS KUNTZ/

Supervisory Patent Examiner, Art Unit 2614